AMENDMENTS TO THE SPECIFICATION

Please insert the following heading before the paragraph beginning on page 1, line 3:

Background Of The Invention

(1) Field of the Invention

Please insert the following heading before the paragraph beginning on page 1, line 9:

(2) Description of the Art

Please insert the following heading before the paragraph beginning on page 6, line 9:

Summary Of The Invention

Please insert the following heading before the paragraph beginning on page 13, line 11:

Description Of The Figures

Please insert the following heading before the paragraph beginning on page 14, line 8:

Description Of A Preferred Embodiment

Please amend the paragraph which begins on page 16, line 1 as follows:

The objective of the first stage of the pre-processing is that elements x_i (i=1, . . . , m) of the n-dimensional ($m \leq n$) spectral vector x should be proportional to the square roots $\sqrt{Pi}$ of integrated power P_i within different frequency bands, rather than the conventional logarithms of integrated power within different frequency bands. Further, elements x_i (i=1, . . . , m) should be scaled such that their squares should sum to a

constant A that is independent of the total power integrated across all frequency bands within the frame corresponding to that spectral vector. Thus, if the frame is sampled into m frequency bands, m of the elements x_i of the n-dimensional ($m \leq n$) spectral vector **x** should satisfy

~~$x_i = A\sqrt{P_i} \Big/ \sum_{j=1}^{m} P_j \quad (i = 1, \ldots, m)$~~ ~~(Equation 1)~~

$$x_i = \frac{\sqrt{AP_i}}{\sqrt{\sum_{j=1}^{m} P_j}} \quad (i = 1, \ldots, m) \quad \text{(Equation 1)}$$

which implies

$$\sum_{j=1}^{m} x_j^2 = A.$$

Please amend the paragraph beginning on page 16, line 24 as follows:

The steps involved in the novel encoding of spectral vectors are represented in the flow diagram of Figure 3 and listed as follows (a-e). After (a) choosing a value for the constant A to be used for all frames of speech, (b) the first step to be applied for each individual frame of speech is the same as the conventional process for conducting a spectral analysis in order to obtain *m* values of the integrated power P_i (i=1 ,...,m) within *m* different frequency bands spanning the audible frequency range. Then, instead of taking the logarithms of these power-values as is conventional in the prior art, (c) their sum $\sum_{j=1}^{m} Pj$ and (d) their square roots $\sqrt{Pi}$ (i=I . . . ,m) are computed. (e) each square-root value $\sqrt{Pi}$ is then divided by the <u>square root of</u> total power $\sum_{j=1}^{m} Pj$ (and

multiplied by a constant scaling factor *A* as desired) to obtain elements x_i (i=1 ,...,m) of the novel encoding of the spectral vector defined by equation 1.